we accordingly hail its advent as the embodiment, *ad longum*, of our own reiterated warnings and exposures of a system of error but too implicitly and indiscriminately adopted and cherished, with the best of motives, by contemporary journalists.

Counsel to Inventors of Improvements in the Useful Arts. By THOMAS TURNER, of the Middle Temple. F. Elsworth, Chancery-lane.

THE author has displayed in this, as in his former little work on "Copyright in Design," a talent for interweaving grave and weighty counsel with pleasant anecdote and reminiscence, gleaned from a varied sphere of reading, and dashed off into really a most readable little volume.

Its main aim, however, is—firstly, to offer some suggestions as to the cultivation of the fields of useful invention and the settlement of new tracts of its territory; and secondly, to exhibit the inventor's legal position in the general features of its privileges and conditions, leaving its forms and minutiæ to be dealt with when the special circumstances arrive.

Miscellanea.

METROPOLITAN WATER SUPPLY.—The Board of Health, it appears, have expressed an opinion "that the works for supplying the public with water should be under the same public jurisdiction, or management, with works of drainage, paving, and surface draining, and that pending further investigations as to the practical means of applying the foregoing principle to the metropolis, it is inexpedient to sanction the investment of fresh capital in the same field of supply, as it is probable that the new works will have to be repurchased, and there can be no security that these will be applicable to the arrangements that may be hereafter recommended." Sir Geo. Grey seems to be acting on this principle from some remarks made by him on the several water-bills which were proceeding before Parliament. ——Metropolitan district meetings are being held in all quarters, to agitate the supply question; and at some of these meetings Government control is being very jealously repudiated. Delegates have been sent to vote and aid in the movement with the newly-formed Metropolitan Parochial Supply Association, and numerous parishes have supported their delegates in voting sums of money to forward the objects of that association,—namely, to watch the bills before Parliament, and endeavour to obtain the most continuous, cheapest, and best supply of water, encouraging all water schemes till the most perfect method be examined and adopted. A correspondent writes,—as you have indicated in several papers in THE BUILDER that the great point to accomplish is the *adequacy* of the supply of *good* water, and that expense is comparatively unimportant (thus pointing towards the Henley-on-Thames scheme), permit me to suggest that if the waters that fall on the Cotswold Hills were judiciously collected in one or more great reservoirs, and a direct conduit made thence to Henley-on-Thames, a large body of water would be thus conveyed to that river in the way of compensation, which is now altogether diverted from it to the Gloucester side of the hills, or escapes in evaporation.—CHEMES.

SALFORD FREE LIBRARY AND MUSEUM.—The evening attendance is already so large, that an additional reading-room has been opened. During the past month more than 5,000 persons have frequented the reading-room, and the number of books given out averages 544 volumes every week. Not the slightest damage or loss has been sustained. A variety of gifts, including "a library" at a cost of 50*l.*, are already pouring in upon the institution.

JOINERY.—A patent has been granted to Mr. W. Furness, Lawton-street, Liverpool, for improvements in machinery for cutting, turning, planeing, moulding, dovetailing, boring, mortising, tongueing, grooving, and sawing wood; also, for sharpening and grinding tools or surfaces; and also, in welding steel to cast-iron.

THE LATE FIRE IN LAMBETH.—SIR: Will you permit me to notice a remark in THE BUILDER of the 16th inst., viz.:—"A statement has reached us, to the effect that, if Mr. Braidwood had listened to the urgent intreaties of Messrs. Nickells, and brought water to bear on a certain portion of their premises, property to a large amount might have been saved." Much as I regret the serious loss sustained by Messrs. Nickells, I have seen no reason to alter my opinion as to the propriety of the steps taken by me at the fire above referred to. Taking into account the limited supply of water at my command, the force and direction of the wind, if I had attempted to save any portion of Messrs. Nickells' premises, I must have allowed the fire to burn to far greater extent into the York and Westminster-bridge roads, by which a very much larger amount of property would have, I have no doubt, been lost than could by any possibility have been saved in Messrs. Nickells' premises. A very little consideration will show that my duty at a fire is not to protect any particular property, but to make the aggregate loss as small as possible. It is gratifying to me to know that the Insurance Companies who have lost large sums on Messrs. Nickell's premises, have not expressed any dissatisfaction with my mode of proceeding.—JAS. BRAIDWOOD, Superintendent of the London Fire Engine Establishment.

THE NATIONAL MONUMENT AT WASHINGTON.—We last week gave some account of what has been doing of late with respect to the Virginian monument to Washington. We have now to speak of the monument to the same hero, designed, ever since the year 1783, to be erected in the capitol itself at the city of Washington, and now in course of erection there. The fund for this purpose at present amounts to 87,000 dollars; but the whole cost of obelisk and pantheon will be 1,122,000 dollars. —of obelisk alone 552,000 dollars. The floor of the latter is now completed, of massive blocks of laminated granite, and at the height of 17 feet above the ground the obelisk itself has been commenced. It is 55 feet square in girth and cased with marble on walls 15 feet thick, with a cavity of 25 feet, and will be ascended interiorly by machinery and stairs. In the centre is placed the intended tomb of Washington. The entire design embraces the idea of a grand circular colonnaded building, 250 feet in diameter, and 100 feet high, from which springs the obelisk shaft, 70 feet at base and 500 feet high! The rotunda forming the grand base is surrounded by thirty columns of 12 feet diameter, and 45 feet high, elevated on a stylobate of 20 feet elevation and 300 feet square, surmounted by an entablature 20 feet high, and crowned by a balustrade 15 feet high. The terrace outside the colonnade is 25 feet wide, and the pronaos or walk within, 25 feet. The site is near the Potomac river, south of the president's house, on the ground selected by Washington, and made public on laying out the city. The monument will be seen from all parts of the city and surrounding country.

LECTURE ON AN EXHIBITION OF PAINTINGS.—At an exhibition in the rooms of the Leicester Literary and Philosophical Society, Mr. J. Fowler, as reported in the local *Journal*, lately read two lectures, to crowded audiences, on modern art in general, and on the merits and demerits of the respective pictures before the lecturer and his audiences in particular. "He had not undertaken the task with hostile feelings to any person," he said, "but in all kindness and deference to the claims of others, with a desire to be useful to his younger brethren of the easel,—to point out what appeared to he the principles of truth and beauty in his profession, and to give pleasure to the members of that society." Dr. Noble, in moving a vote of thanks to Mr. Fowler, observed that where he could give unqualified approbation he had evidently done so with pleasure, while his censure had been administered gently and kindly. He congratulated the town upon having an exhibition which he looked upon as forming an epoch in its history.

SHREWSBURY RAILWAY STATION.—The statement that this station was destroyed by the late high winds (taken from a provincial journal) is incorrect. The damage done was to an engine shed.

PROJECTED WORKS.—Advertisements have been issued for tenders, by 18th March, for the erection of a parsonage house and other offices at Wheatley; by 12th March, for the maintenance and repairs of the stations and buildings between Portsmouth and Cosham, on the Brighton and South Coast Railway, and of the permanent way and works at the Portsmouth terminus of same line, both for seven years, and in one or two contracts; by 28th inst., for the erection of four cottages at Poplar; by 11th March, for the erection of new wings and additions to a lunatic asylum in Yorkshire; by 11th March, for the erection of the Victoria College, Jersey; by a date not specified, for sundry reparations to the "going gear" of a windmill, near London; by a date not specified, for the erection of public baths and washhouses at Nottingham; by 5th March for ten travelling cranes and a supply of switches and crossings for the Great Northern Railway Company; by 12th March for supplying the navy dockyards with locks and lock furniture; by 26th inst. for the construction of two reservoirs near Otley; by 1st March, for draining and sewering at Leeds; by a date not specified, for the works to be executed in the erection of St. Matthew's Church, Leeds; by 26th inst. for enlarging a tank and constructing a gas-holder for the Stockton-on-Tees new Gas Company; and by 25th inst., for enlarging two or three tanks and erecting two or three gas-holders, with fittings, &c., for the Equitable Gas Company.

CAST-IRON LIGHTHOUSE ON GIBB'S HILL, IN THE BERMUDAS.—The form of this tower is that of a strong conoidal figure, 105 feet 9 inches in height, terminated at the top by an inverted conoidal figure, 4 feet high, in lieu of a capital; its extreme outside diameter 24 feet, at the narrowest part 14 feet, and at the top 20 feet. The external shell is constructed of 135 concentric cast-iron plates, having inside flanges, and varying in thickness from 1 inch at the base to about ¾ of an inch at the top. In the centre of the tower there is a hollow cast-iron column, 15 inches in diameter in the inside, and of ¾ inch metal, for supporting Fresnel's dioptric apparatus, and in which the revolving weight descended; it was also used, in the daytime, for the raising and lowering of stores, and likewise contained the waste-water pipe. The lower part of the tower is filled with concrete, leaving a well, faced with brickwork, about 8 feet in diameter, and 20 feet in depth, in the centre. Above this are the seven floors, the two lower ones being lined with brickwork, and used as store rooms, and the upper ones, lined with sheet iron, used in living rooms for the light-keeper. The structure occupied about one year in its erection, the different parts having been landed about the end of November, 1844, the first plate being erected on Gibb's Hill, on the 19th December, 1844, and the last plate of the tower on the 9th of October, 1845. The whole cost of the structure, including the lantern and light apparatus, is stated to have been about 7,690*l.*, and the annual expense of maintaining it about 450*l.*

ARRANGEMENT OF GAS METERS.—SIR: In supplying the wet meter with water, some care should be exercised. The suppliers are safer than the consumers. So soon as the water decreases in quantity, as would allow more gas to pass than would be registered, directly does a valve (until then kept open by a float), close to prevent the passage, and darkness ensues, until additional water be supplied to the meter. This is all very admirable for the security of the companies, but if there be too much water, i. e. more than actually required, the consumer does not then obtain the proper quantity of gas, but there is a limit to this in what is termed the dry-well, into which, if the water should be in such excess as to flow, the consumer has notice by the flickering or jumping of the several lights. Now, it is between these two extremes—the want and the excess of water—that the consumer's attention should be directed, and by the insertion of a piece of plate-glass in the front of the meter, the quantity of water may be ascertained at a glance, at any time, and be kept at a fair height (to a mark), and so a fair quantity of gas measured. Perhaps it will be as well to say that this can only be done, without leave, where the meter belongs to the consumer. R. W.

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